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EAT MORE HEMP



Hemp Seed – Delicious and Nutritious!



Hemp is one of the oldest agricultural crops grown by man. It's grown for its seed and fiber. The seed is one of the most perfectly balanced foods we can eat. Hemp is a food, not a supplement. The long, strong fiber from the hemp plant is also outstanding. It's estimated that over 25,000 products can be made from the hemp plant.

HEMP NUTRITION

The nutritional composition of hemp seed is quite unique and exceptional! Whole hemp seeds contain approximately 36% dietary fat, 26% high quality and digestible protein and 31% carbohydrates comprised mainly of dietary fiber, in addition to an interesting array of vitamins and minerals.

Hemp seed's dietary fat is primarily composed of polyunsaturated fats or the "good fats." Hemp seed oil's fatty acid profile is comprised of 80% polyunsaturated fats, 11% monounsaturated fats, 9% saturated fats and zero trans fats. Health organizations (1.) have recommended that fat intake should make up 20% to 35% of your total calories. They further recommend that most of your fat intake should come from polyunsaturated and monounsaturated fats, while limiting the intake of trans and saturated fats. Hemp seed dietary fat meets this recommendation.

Hemp Seed Oil contains Zero trans fat and is cholesterol-free.

Hemp Seed Oil provides one of the highest concentrations of polyunsaturated fatty acids (PUFAs) categorized as Omega-6 and Omega-3 Essential Fatty Acids (EFAs) in an ideal 3:1 ratio. EFAs are vital for good health but cannot be manufactured by our body, and so they must be present in our diet through the foods we eat. EFAs are both important components of cell membranes and are precursors for substances in the body involved with regulating blood pressure and inflammatory responses.

Hemp Seed Oil also uniquely contains naturally-occurring Gamma-Linolenic Acid (GLA) and Stearidonic Acid (SDA). GLA and SDA are direct metabolites of Omega-6 and Omega-3 EFAs, respectively. These two metabolites are important for regulating inflammation and auto-immune functions in our bodies.

Hemp seed is a source of high quality, plant based protein and is vegan. Analysis of hemp food proteins has resulted in a Protein Rating of 40 (2.) and above, meaning that the protein content in hemp foods is not only present in high amounts, but also of a high quality!

Hemp protein is free of trypsin-inhibitors. Trypsin is a key enzyme that breaks down peptide bonds in proteins, enabling protein uptake in the human body. Hemp protein contains no trypsin inhibitors, such as those found in other protein rich sources like soy that can cause flatulence and gas. Hemp seed and foods not only contain a high quality protein, available in high amounts, but they are also free of inhibitors that impede protein digestion making hemp highly digestible.

Hemp protein is very high in dietary fiber. Fiber helps to keep the digestive system healthy and functioning properly. The dietary fiber found in hemp is primarily composed of insoluble fiber, which helps with digestion and maintaining regular bowel movements.

Hemp is naturally gluten and lactose free. Gluten is a type of protein found in most grains commonly used in cereals and baked goods. Most people allergic to gluten have a similar reaction to lactose and soy. Hemp foods naturally have zero gluten and lactose content (3.).

(1.) Health Organizations include WHO, FAO, Canada Health and US Food and Drug Administration

(2.) Per Health Canada Regulations, Protein Rating = Protein in a Reasonable Daily Intake x Protein Efficiency Ratio (PER); Reasonable Daily Intake for hemp products = 64 grams.

(3.) Hemp seed is naturally gluten-free. However, cross-contamination can occur at the field level during handling, transportation and storage. CMJ supplier of hemp food products conducts regular gluten testing on seed lots to ensure that gluten content is <20 ppm, which is the acceptable threshold by both the World Health Organization (WHO) and Health Canada for a gluten-free claim.

Hemp: Full of Vitamins and Minerals!

Our bodies need various vitamins and minerals to stay healthy. Each vitamin or mineral does a specific job in the body. Some do better working in teams to keep body cells healthy. Here are some of the vitamins and minerals present in hemp foods and a brief descriptions of their health benefits and function.

- **Good source of folate (Vitamin B9)** Folate is essential to numerous bodily functions including the production of healthy red blood cells and cells that line the digestive tract. It is especially important during periods of rapid cell division and growth since Folate is necessary for the creation and maintenance of new cells, and for DNA and RNA synthesis. Folate is also essential for the prevention of neural tube defects of a fetus during the first few weeks of pregnancy.
- **Good source of thiamine (Vitamin B1)** Thiamine plays a critical role in the energy metabolism of all cells. Thiamine helps to convert carbohydrates and amino acids into energy and is essential for proper functioning of the heart, muscles and nervous system.
- **Contains riboflavin (Vitamin B2)** Riboflavin is necessary for energy metabolism in our bodies. It is also essential for body growth, reproduction, red cell production and supports normal vision and skin health.
- **Contains niacin (Vitamin B3)** Niacin participates in the energy metabolism of all cells in the body. Aids in the functioning of the digestive system, skin, and nerves; conversion of food to energy.
- **Good source of Vitamin B6** which aids in the production of antibodies in the immune system, helps maintain normal nerve function and is required for the metabolism of amino acids and fatty acids. Vitamin B6 helps synthesize hemoglobin (for red blood cells) and neurotransmitters (the communication molecules of the brain). Vitamin B6 helps regulate blood glucose and is critical to the development of the brain and nervous system of a fetus.
- **Source of Potassium** that aids the body's growth and maintenance. Potassium helps maintain normal water balance between the cells and body fluids, electrolyte balance, cell integrity and is critical to maintaining a heartbeat, proper heart function, the transmission of nerve impulses and contraction of muscles.
- **Very high in Phosphorus** that together with calcium is vital for formation of bone, teeth and nerve cells. Phosphorus helps to maintain the acid-base balance of cellular fluids and is part of DNA and RNA of every cell - and thus essential for growth and renewal of tissues. Phosphorus assists in energy metabolism and forms phospholipids within the cell membrane.
- **Rich in Magnesium** that assists absorption of calcium and potassium in our bodies. Magnesium is also involved in bone mineralization, activating B vitamins, acting as a nerve & muscle relaxant and providing blood clotting. Magnesium is also responsible for the release and use of energy from nutrients.
- **Excellent source of Copper**, which is required by our bodies for absorption, storage and metabolism of iron, the formation of hemoglobin (in red blood cells) and collagen (connective tissue). Copper helps supply oxygen to the body and is required for brain development and nerve cell communication.
- **Excellent source of Iron** that is a major component of our hemoglobin and myoglobin, both of which are responsible for carrying oxygen in the blood and to our muscles. Iron is required in our bodies to make new cells, amino acids, hormones and neurotransmitters. Iron is also important for enzymatic activity in energy-yielding pathways and is involved in producing ATP (adenosine triphosphate) the body's energy source.
- **Excellent source of Zinc** that assists enzyme activity in all our cells. Zinc also aids protein, fat and carbohydrate metabolism, supports the immune system, growth and fertility, wound healing, healthy skin, nails and eyes.



Eat Hemp and You Eat Healthy!



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A STORY ABOUT HEMP AND ITS MANY USES!

"Grandfather Hemp, I don't understand; why have we been ostracized from farm fields in the United States? We did not do anything wrong. For centuries, our older kin folks provided so much for the United States. At the time it was a requirement for farmers to grow hemp. Even this past century, during World War II we headlined a government campaign titled: 'Hemp for Victory'. What happened?" asked Cousin Mary Jane.

"Well, Cousin Mary Jane", replied Grandfather Hemp. "Some of the problem started with the Marihuana Tax Act of 1937. Confusion, myths, dirty politics and some large corporations all contributed to our demise in being able to be cultivated by U.S. farmers. It is a real shame, but the demand for hemp in the United States is growing again. However, currently, if companies or consumers want to engage in using the raw materials or foods from hemp, it must be imported from other countries. U.S. farmers cannot grow the crop due to outdated federal policies which confuse industrial hemp with the THC variety of cannabis. It's all quite silly really."

"But Grandfather Hemp," interrupted Cousin Mary Jane.

"I thought the world, along with the United States was getting wiser to being more green."

"Yes, but not enough," Grandfather Hemp responded. "Hemp is the greenest crop that can be cultivated and the contents of the hemp plant can be used to provide countless green products. A field of hemp within a few months can provide the natural resources for so many things that are useful and strong, yet biodegradable that it is truly incredible. Chemicals and pesticides are not needed to grow hemp and it naturally provides nutrients back to the soil so farm fields are not stripped after it has been harvested. Further, not only can hemp provide the world with a viable green energy source, as a food, I know of no other plant that can provide the nutritional value that comes from the hemp seed.

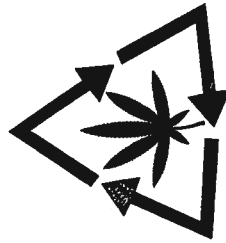
Hemp seeds contain all the essential amino acids and essential fatty acids necessary to maintain healthy human life.

It is very hard for me to understand why the food from the hemp seed is not utilized more to help feed starving children around the world."

"Grandfather Hemp, what can I do to help?" inquired Cousin Mary Jane.

"You can help by telling anyone who will listen about us. Every part of the hemp plant can be used for different products. People need to know and understand all we can do. Encourage people to join Michigan Industrial Hemp Education and Marketing Project, aka MIFHEMP. They are a non-profit organization with a dedicated group of people who are working to expand hemp as a natural resource for industrial and private enterprise here in Michigan. They are working in getting our legislators to act so hemp can once again be grown in Michigan. Their mission is to educate the public and state government officials about Industrial Hemp and try to clear up the myths," continued Grandfather Hemp.

"It is estimated that over \$360 million in hemp retail sales is occurring in the United States today; so why are we importing? The United States is the only industrial country that virtually prohibits its farmers from growing this green, high cash yielding crop. Michigan's economy can use this industry and Michigan could be a world leader with the production of hemp products," claimed Grandfather Hemp. "But it takes a lot of support. We need our government to act and we need people like you to help us to get the attention we need so we are not ignored any longer."



"The prestige of government has undoubtedly been lowered considerably by the prohibition law. For nothing is more destructive of respect for the government and the laws of the land than passing laws which cannot be enforced. It is an open secret that the dangerous increase of crime in this country is closely connected with this."

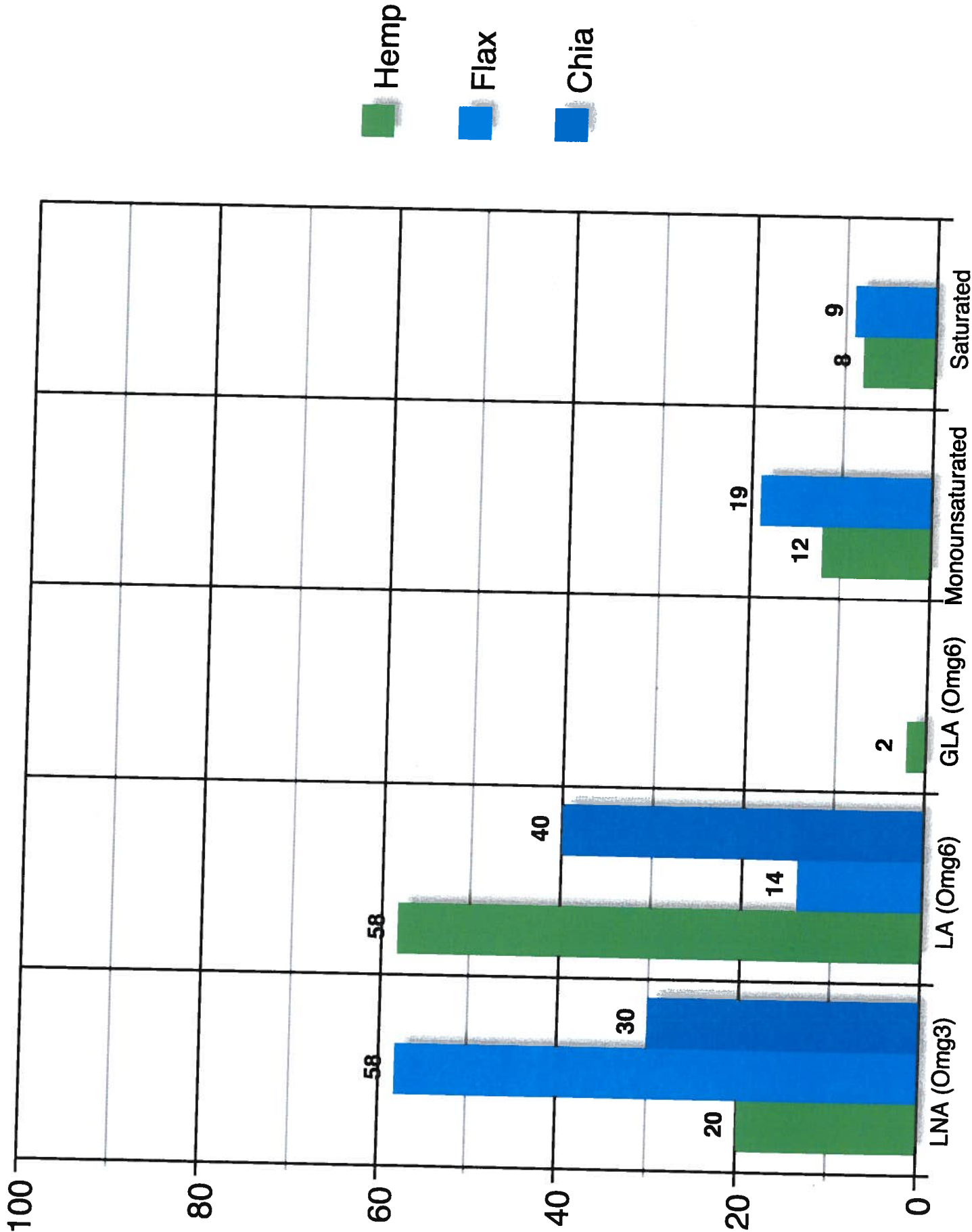
Albert Einstein

www.cousinmaryjane.com



Omegas are Essential Fatty Acids (EFAs). Our bodies do not produce EFAs, yet they are necessary for good health. Omegas are vital in body and brain function; and the immune system. Lack of sufficient Omegas can be very damaging to our bodies and can lead to neurological conditions, obesity, skin disorders, inflammation and heart diseases.

Seed Oil Omega Composition



USA: Flour 32 g (4 tbsp)

Nutrition Facts

Per 32g serving (4 tbsp)

Amount Per Serving	Calories from Fat 25	% Daily Value*
Calories 130		
Total Fat 3g		5%
Saturated Fat 0g		0%
Trans Fat 0g		
Polyunsaturated Fat 2.5g		
Omega-6 1.5g		
Omega-3 0.6g		
Monounsaturated Fat 0g		0%
Cholesterol 0mg		0%
Sodium 0mg		0%
Potassium 280mg		8%
Total Carbohydrate 14g		5%
Dietary Fiber 13g		53%
Soluble Fiber 1g		
Insoluble Fiber 13g		
Sugar 1g		
Protein 11g		
Vitamin A	0%	
Vitamin C	0%	
Calcium	4%	
Iron	25%	
Vitamin E	0%	
Thiamine	20%	
Riboflavin	6%	
Niacin	8%	
Vitamin B6	15%	
Folate	10%	
Phosphorus	30%	
Magnesium	40%	
Zinc	15%	
Copper	30%	
Manganese	210%	

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories: 2,000	2,500
Total Fat	Less than 65 g	80 g
Saturated Fat	Less than 20 g	25 g
Cholesterol	Less than 300 mg	300 mg
Sodium	Less than 2,400 mg	2,400 mg
Total carbohydrate	300 g	375 g
Dietary Fiber	25 g	30 g

Calories per gram
Fat 9 • Carbohydrates 4 • Protein 4

USA: Toasted Hemp Seed 50g (5 tbsp) SALTED

Nutrition Facts

Per 50g serving (5 tbsp)

Amount Per Serving	Calories from Fat 160	% Daily Value*
Calories 280		
Total Fat 18g		28%
Saturated Fat 1.5g		8%
Trans Fat 0g		
Polyunsaturated Fat 14g		
Omega-6 10g		
Omega-3 3.5g		
Monounsaturated Fat 2g		0%
Cholesterol 0mg		0%
Sodium 140mg		6%
Potassium 380mg		11%
Total Carbohydrate 16g		5%
Dietary Fiber 15g		60%
Soluble Fiber 1g		
Insoluble Fiber 14g		
Sugar 1g		
Protein 13g		
Vitamin A	0%	
Vitamin C	0%	
Calcium	6%	
Iron	35%	
Vitamin E	6%	
Thiamine	20%	
Riboflavin	8%	
Niacin	10%	
Vitamin B6	20%	
Folate	20%	
Phosphorus	50%	
Magnesium	50%	
Zinc	20%	
Copper	45%	
Manganese	300%	

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories: 2,000	2,500
Total Fat	Less than 65 g	80 g
Saturated Fat	Less than 20 g	25 g
Cholesterol	Less than 300 mg	300 mg
Sodium	Less than 2,400 mg	2,400 mg
Total carbohydrate	300 g	375 g
Dietary Fiber	25 g	30 g

Calories per gram
Fat 9 • Carbohydrates 4 • Protein 4

USA: Hulled 30g

Nutrition Facts

Per 30g serving (3 tbsp)

Amount Per Serving	Calories from Fat 140	% Daily Value*
Calories 180		
Total Fat 15g		23%
Saturated Fat 1g		5%
Trans Fat 0g		
Polyunsaturated Fat 12g		
Omega-6 9g		
Omega-3 3g		
Monounsaturated Fat 1.5g		0%
Cholesterol 0mg		0%
Sodium 0mg		0%
Potassium 360mg		10%
Total Carbohydrate 1g		0%
Dietary Fiber 1g		4%
Soluble Fiber 0g		
Insoluble Fiber 1g		
Sugar 0g		
Protein 10g		
Vitamin A	0%	
Vitamin C	0%	
Calcium	2%	
Iron	20%	
Vitamin E	2%	
Thiamine	25%	
Riboflavin	4%	
Niacin	6%	
Vitamin B6	15%	
Folate	10%	
Phosphorus	50%	
Magnesium	50%	
Zinc	20%	
Copper	25%	
Manganese	110%	

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories: 2,000	2,500
Total Fat	Less than 65 g	80 g
Saturated Fat	Less than 20 g	25 g
Cholesterol	Less than 300 mg	300 mg
Sodium	Less than 2,400 mg	2,400 mg
Total carbohydrate	300 g	375 g
Dietary Fiber	25 g	30 g

Calories per gram
Fat 9 • Carbohydrates 4 • Protein 4